Demographic Characteristics of Latin America

Limited and brief though it is, this review emphasizes the magnitude of the disease problem in Latin America. It supports the thesis that the population is young, that mortality rates are high (especially in the early years of life), and that infectious and parasitic diseases are reponsible for most of the morbidity and mortality drain on the population.

MOST OF THE TERRITORY of the Latin American Republics lies between the Tropic of Cancer and the Tropic of Capricorn. During the decade 1942–52, the Institute of Inter-American Affairs cooperated in the field of public health with 18 of the 20 countries in this region. Fourteen of these 18 countries are wholly within the Torrid Zone. Only one, Uruguay, is completely in the Temperate Zone. The remaining three lie partly in both zones. It is therefore to be expected that tropical or subtropical diseases would be found in almost all of these countries. In the areas of high altitude, which characterize the Andean regions in particular, the diseases are likely to be those of a Temperate Zone, though the region lies completely in the Tropics.

The *Servicios*, therefore, were confronted with both temperate and tropical disease problems. The characteristics of the problems were not difficult to define, but their magnitude was less readily determined. The reasons for the latter stem, in considerable part, from the inadequacies of the morbidity and mortality data available. By using both direct and indirect evidence, however, it was possible to formulate a reasonably true picture of the disease problems.

This material on demographic characteristics and that following on specific diseases and nutrition are the sixth and seventh in a series of excerpts from the report on the Public Health Service's evaluation of a decade of cooperative health programs of the Institute of Inter-American Affairs. The background of the report and of these excerpts will be found in Public Health Reports for September 1953, beginning on page 829.

Mortality Rates

Data on the number of deaths and the death rates in seven Latin American countries for 1942 and 1949 (table 1) indicate that considerable improvement in health conditions has taken place during this 7-year period. When these data are compared with comparable data for the United States (table 1), however, it is evident that these countries are in a position to benefit still more from intensive efforts to improve health services. For example, the crude death rate in Chile in 1949 was 2.2 per 1,000

Table 1. Number of deaths and death rates per 1,000 population in selected countries (stillbirths excluded)

Country	1942			1949		
	Population (in thousands)	Number of deaths	Death rate	Population (in thousands)	Number of deaths	Death rate
Mexico	20, 657	471, 600	22. 8	24, 448	[1] 438, 300	[1] 17. 9
Nicaragua	1, 023	17, 186	16. 8	1, 184	11, 910	10. 1
El Salvador	1, 849	38, 250	20. 7	2, 150	28, 339	13. 2
Chile	5, 130	104, 122	20. 3	5, 712	103, 384	18. 1
Colombia	9, 469	151, 809	16. 0	11, 015	154, 662	14. 0
Peru	7, 272	92, 804	13. 4	8, 240	[1] 85, 406	[1] 10. 8
Venezuela	3, 906	63, 528	16. 3	4, 595	57, 477	12. 5
United States	134, 831	1, 385, 187	10. 4	149, 149	1, 443, 607	9. 7

[1] Provisional data.

SOURCE: Statistical Office of the United Nations, Demographic Yearbook, 1951.

population lower than the rate in 1942; yet in both years the Chilean rate was about twice that for the United States.

By Age

More significant than general death rates are the rates by age and by cause of death. The data in table 2 show that people in the five Latin American countries shown are prone to die young. The mortality rates for the first year of life and for the succeeding 4 years are uniformly high in comparison with the rates for the United States. These rates are known to be susceptible of substantial and rapid reduction by effective health services. The evidence, therefore, leads to the conclusion that uniformly effective health services have not yet been developed in most of these countries.

Table 2. Death rates per 1,000 population in selected countries, by age (stillbirths excluded)

Age group (years)	Mexico 1940	Nicaragua 1940	Chile 1940	Colombia 1938	Venezuela 1941	United States 1940
All ages	23. 3	14. 4	21. 5	17. 3	16. 2	10. 8
Under 1 year	205. 3	93. 0	239. 9	150. 5	126. 9	54. 9
1–4	48. 2	23. 2	31. 5	28. 5	21. 3	2. 9
5–9	7. 9	5. 3	2. 8	5. 8	5. 2	1. 1
10–14	4. 0	2. 4	3. 3	3. 1	[1] 4. 1	1. 0
15–19	6. 0	4. 1	6. 6	4. 5	----	1. 7
20–24	9. 0	6. 6	9. 4	6. 2	[2] 8. 3	2. 4
25–29	10. 0	7. 9	9. 5	7. 1	----	2. 8
30–34	11. 5	8. 9	10. 1	8. 5	[3] 11. 4	3. 4
35–39	13. 2	9. 0	10. 9	9. 7	----	4. 4
40–44	15. 4	11. 0	12. 9	[4] 12. 7	[4] 15. 1	6. 1
45–49	18. 0	13. 1	15. 5	----	----	8. 7
50–54	21. 6	14. 5	19. 3	[5] 18. 8	[5] 21. 5	12. 8
55–59	27. 1	19. 0	27. 3	----	----	18. 6
60–64	40. 4	24. 7	35. 4	[6] 35. 6	[7] 58. 1	26. 8
65–69	54. 8	42. 4	53. 9	----	----	39. 2
70–74	84. 7	55. 4	72. 5	[8] 93. 2	----	61. 1
75–79	108. 0	98. 0	103. 1	----	----	94. 8
80–84	161. 1	98. 8	134. 2	----	----	145. 6
85 and over	295. 2	129. 0	238. 8	----	----	235. 7

[1] Rate for ages 10–19. [2] Rate for ages 20–29. [3] Rate for ages 30–39. [4] Rate for ages 40–49. [5] Rate for ages 50–59. [6] Rate for ages 60–69. [7] Rate for ages 60 and over. [8] Rate for 70 and over.

SOURCE: Statistical Office of the United Nations, Demographic Yearbook, 1951.

By Causes of Death

The value of mortality data for specific diseases, such as those shown in table 3, in defining the disease problems of Latin America is limited by two factors. First, the proportion of registered deaths in many Latin American countries listed as due to ill-defined or unknown cause is comparatively large. For example, in the countries included in the table, the percentages of registered deaths recorded as due to ill-defined or unknown cause were 23.6 for Colombia, 15.2 for Peru, 6.0 for Costa Rica, and 21.0 for El Salvador; the percentage for the United States was 1.2. Second, medical certification applies to only a part of the registered deaths. In Colombia, 41.7 percent of registered deaths in 1947 were medically certified. In the same year, the percentage in Costa Rica was 59.0; in El Salvador, 16.7; in Mexico, 51.0; in Chile, 71.8; and in Uruguay, 97.7.

Despite these limitations, there is fair agreement among the specific disease rates for the several countries. The highest mortality rates among the infectious diseases are usually for diarrhea and enteritis, followed by those for tuberculosis, malaria, and whooping cough, but with bronchitis and influenza frequently occupying important positions. It may be that some of the tuberculosis deaths are reported as bronchitis deaths, which would serve to magnify the importance of the latter.

Striking Differences

When the specific disease rates of these four Latin American countries are compared with those of the United States, the most striking differences are (*a*) the higher incidence of deaths due to the infectious diseases, especially those usually associated with infancy and early life; and (*b*) the lower incidence of deaths from cancer, heart disease, and nephritis, which are characteristic of the later years of life. A similar picture is presented in table 2, in that the favored mortality position of the younger age groups in the United States largely dis-

Table 3. Number of deaths and death rates per 100,000 population in five countries, by selected cause (stillbirths excluded)

Cause	United States 1948		Colombia 1948		Peru 1948		Costa Rica 1949		El Salvador 1948	
	Number of deaths	Death rate	Number of deaths	Death rate	Number of deaths	Death rate	Number of deaths	Death rate	Number of deaths	Death rate
All causes	1, 444, 337	989. 0	154, 392	1, 432. 6	83, 022	1, 074. 3	9, 884	1, 179. 4	30, 527	1, 454. 3
Typhoid and paratyphoid	233	. 2	1, 560	14. 5	854	11. 1	50	6. 0	82	3. 9
Whooping cough	1, 146	. 8	3, 856	35. 8	5, 970	77. 2	235	28. 0	751	35. 8
Diphtheria	634	. 4	485	4. 5	141	1. 8	61	7. 3	29	1. 4
Tuberculosis (all forms)	43, 833	30. 0	4, 623	42. 9	6, 786	87. 8	439	52. 4	845	40. 2
Malaria	170	. 1	2, 929	27. 2	2, 002	25. 9	525	62. 6	2, 794	133. 1
Syphilis	11, 616	8. 0	655	6. 1	170	2. 2	51	6. 1	372	17. 7
Influenza	5, 068	3. 5	2, 067	19. 2	6, 468	83. 7	24	2. 9	344	16. 4
Smallpox	5	0	463	4. 3	1, 672	21. 6				
Measles	888	. 6	760	7. 1	1, 343	17. 4	21	2. 5	142	6. 8
Typhus fever	177	. 1	1, 537	14. 3	1, 392	18. 0	4	. 5	1	0
Diarrhea and enteritis	8, 831	6. 0	15, 470	143. 5	3, 964	51. 3	1, 594	190. 2	5, 872	279. 7
Other infectious or parasitic diseases	9, 178	6. 3	6, 792	63. 0	2, 304	29. 8	756	90. 2	1, 325	63. 1
Cancer	197, 042	134. 9	3, 462	32. 1	974	12. 6	492	58. 7	378	18. 0
Heart diseases	471, 469	322. 8	6, 733	62. 5	2, 867	37. 1	737	87. 9	363	17. 3
Nephritis	77, 377	53. 0	3, 827	35. 5			203	24. 2	254	12. 1
Bronchitis	3, 450	2. 4	7, 137	66. 2	2, 173	28. 1	418	49. 9	1, 437	68. 5
Ill-defined or unknown cause	18, 082	12. 4	36, 602	339. 6	12, 663	163. 9	593	70. 8	6, 423	306. 0

SOURCE: Statistical Office of the United Nations, Demographic Yearbook, 1951.

appears in the older age groups where the degenerative diseases begin to take their toll.

The young-age deaths that characterize the Latin American countries constitute a tremendous drain on the human resources of the region and are an economic handicap of first importance. The seriousness of the situation is mitigated only by the knowledge that these deaths are largely preventable.

As a result of the high mortality in Latin America, especially during infancy, life expectancy is well below that of Western Europe, Canada, and the United States. In Latin America it ranges from 35 years in Venezuela (1949) to 46 in Colombia (1947); in Canada and the United States, it is from 65 to 70 years.

Morbidity Rates

The damage inflicted upon a population by disease is measured more accurately by the number of illnesses produced than by the number of deaths that ensue. Typhoid fever, for example, results in death in about 10 percent of the cases, and this percentage is substantially lowered when appropriate treatment with chloromycetin is employed. Malaria, which ranks with tuberculosis as the world's most prevalent disease, produces death in a relatively small percentage of cases. A somewhat similar situation occurs with most of the infectious and parasitic diseases of man. It is clear, therefore, why the mortality record is quite inadequate to evaluate the burden occasioned by disease. The incapacitation and economic loss that result from illnesses are together the true measure of their importance to mankind.

It is well known that the reporting of illnesses in Latin America is incomplete. Even if a satisfactory reporting system could be devised, it could not operate in these countries since in none of them is there a sufficient number of physicians to attend all the sick. In many sections, notably the rural areas, there are no physicians at all. The most reliable statistics are to be found in the cities and towns where physicians are relatively numerous.

Some idea of the volume of illnesses in Latin America may be obtained from the data for Colombia shown in table 4. It can be estimated that there were at least 1,000,000 illnesses in this country in 1948, if the experience in the half of the population not represented by these data was similar to that shown. Taking into account the many illnesses unattended by a physician and the many that for one reason or another were not reported, the number was probably much greater. In the same year Colombia reported 154,392 deaths from all causes. The total picture of disease thus includes the morbidity as well as the mortality experience.

Table 4. Reported illnesses in Colombia, 1948

[209 of 815 municipalities reporting, representing about half of Colombia's population]

Illness	Number of cases	Rate per 100,000 population
Malaria	89, 727	1, 655
Influenza	75, 756	1, 398
Intestinal parasites	72, 421	1, 336
Hookworm infestation	40, 228	742
Amoebic dysentery	38, 395	708
Gonorrhea	29, 614	960
Syphilis	27, 158	501
Whooping cough	20, 057	859
Typhoid and paratyphoid	11, 207	207
Measles	11, 169	478
Scabies	10, 273	189
Tuberculosis of lungs	8, 667	160
Pneumonia	8, 599	158
Chancroid	7, 802	253
Smallpox	7, 356	71
Diarrhea and enteritus (under 2 years of age)	6, 875	11, 699
Erysipelas	5, 255	97
Mycosis	3, 883	71
Typhus fever	3, 471	90
Pinta	3, 395	62
Relapsing fever	3, 085	57
Chickenpox	2, 954	54
Mumps	2, 790	51
Yaws	2, 357	43
Diphtheria	2, 238	96
Tuberculosis, other than respiratory	416	7
Bartonellosis	25	.05
Undulant fever	4	.07
Other illnesses	9, 441	----------
Total	504, 618	----------

SOURCE: J. W. Mountin, The Basis of a Development Program for Colombia. Washington, D. C., the International Bank for Reconstruction and Development, 1950.